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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,426	12/22/2000	Hiroshi Matsuda	250-827	8033

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EXAMINER	
SHOSHO, CALLIE E	
ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,426

Applicant(s)

MATSUDA, HIROSHI

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2002 and 19 June 2002.
- 2a) ☐ This action is **FINAL** 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 6-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 6-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 6/13/02 and supplemental amendment filed 6/19/02.

It is noted that applicants' amendment to page 6 of the specification has not been entered given that the amendment did not meet the requirements for amendment as set forth in MPEP 714. While applicants' provided "marked-up" version of the changes, applicants did not provide a "clean" version of the amended portion of the specification. Since this portion of the amendment is not in compliance with requirement as set forth in the cited portion of the MPEP, the amendment to page 6 of the specification has not been entered.

Further, it is noted that in light of the new arguments set forth with respect to Asada (U.S. 6,165,258), the following rejection is non-final.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Asada (U.S. 6,165,258).

Asada discloses a stencil printing water-in-oil emulsion ink comprising less than 25% carboxyvinyl polymer including acrylic resin and 0.1-2% sodium borate, i.e. borax. It is disclosed that the ink comprises 10-90% water phase and 10-90% oil phase (col.1, lines 5-6, col.1, line 66-col.2, line 1, col.6, lines 37, 40-43, and 55-56, and col.7, line 5-8).

In light of the above, it is clear that Asada anticipates the present claims.

4. Claims 11-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Asada (U.S. 6,165,258).

Asada discloses a stencil printing water-in-oil emulsion ink comprising less than 25%, preferably 0.5-15%, polymer and 0.1-2% sodium borate, i.e. borax. It is disclosed that the ink comprises 10-90% water phase and 10-90% oil phase (col.1, lines 5-6, col.1, line 66-col.2, line 1, col.6, lines 37, 40-43, and 55-56, and col.7, line 5-8).

Attention is drawn to col.6, lines 55 and 63-66 and col.7, lines 1-2 of Asada which disclose the use of carboxyvinyl polymer, i.e. acrylic resin, and alkyl-modified carboxyvinyl polymer, i.e. alkyl-modified acrylic resin, and that the ink comprises mixtures of polymers. Thus, it is clear that Asada discloses that the ink comprises alkyl-modified carboxyvinyl polymer either alone or in combination with carboxyvinyl polymer and thus, meets the limitations of the present claims.

It is noted that the disclosure in Asada that the polymer is preferably present in amount of 0.5-15% clearly meets the amount of polymer as set forth in present claims 11-12, 18-19, and 25, i.e. 0.01-1% or 0.1-0.6%, while the disclosure that the polymer is present in an amount of less than 25% clearly encompasses the amounts of polymer as set forth not only in claims 11-12, 18-19, and 25 but also in claims 13 and 20.

In light of the above, it is clear that Asada anticipates the present claims.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada (U.S. 6,165,258).

Asada discloses a stencil printing water-in-oil emulsion ink comprising carboxyvinyl polymer including 0.5-15% acrylic resin and 0.1-2% sodium borate, i.e. borax. It is disclosed that the ink comprises 10-90% water phase and 10-90% oil phase (col.1, lines 5-6, col.1, line 66- col.2, line 1, col.6, lines 37, 40-43, and 55-56, and col.7, line 5-8).

The only deficiency of Asada is that the reference discloses the use of 0.5% carboxyvinyl polymer, while the present claims require 0.4% carboxyvinyl polymer.

It is apparent, however, that the instantly claimed amount of carboxyvinyl polymer and that taught by Asada are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of carboxyvinyl polymer disclosed by Asada and the amount disclosed in

the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the amount of carboxyvinyl polymer, it therefore would have been obvious to one of ordinary skill in the art that the amount of carboxyvinyl polymer disclosed in the present claims is but an obvious variant of the amounts disclosed in Asada, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. (U.S. 4,585,815) in view of Asada (U.S. 6,165,258).

Ono et al. disclose a stencil printing water-in-oil emulsion ink comprising 0.5-5% carboxyvinyl polymer such as sodium polyacrylate (col.1, lines 5-6 and col.2, lines 30-31 and 35-37).

The difference between Ono et al. and the present claimed invention is the requirement in the claims of (a) amount of carboxyvinyl polymer and (b) borax.

With respect to difference (a), it is noted that Ono et al. disclose the use of 0.5% carboxyvinyl polymer, while the present claims require 0.4% carboxyvinyl polymer.

It is apparent, however, that the instantly claimed amount of carboxyvinyl polymer and that taught by Ono et al. are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed

ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of carboxyvinyl polymer disclosed by Ono et al. and the amount disclosed in the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the amount of carboxyvinyl polymer, it therefore would have been obvious to one of ordinary skill in the art that the amount of carboxyvinyl polymer disclosed in the present claims is but an obvious variant of the amounts disclosed in Ono et al., and thereby one of ordinary skill in the art would have arrived at the claimed invention.

With respect to argument (b), Asada, which is drawn to stencil printing emulsion ink, disclose the use of 0.1-2% sodium borate, i.e. borax, as an emulsion stabilizer (col.6, lines 31, 37, and 40-43).

In light of the motivation for using borax disclosed by Asada as described above, it therefore would have been obvious to one of ordinary skill in the art to use borax in the ink of Ono et al. in order to improve the stability of the ink, and thereby arrive at the claimed invention.

8. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 06049401 in view of Asada (U.S. 6,165,258).

JP 06049401, an English translation of which is included in this office action, discloses a stencil printing emulsion ink comprising carboxyvinyl polymer that are water-soluble polymers such as acrylic acid resin or sodium polyacrylate. It is disclosed that the ink comprises 50-90% water phase and 10-50% oil phase (abstract, claim 1, paragraph 7, paragraph 14). The table on

page 14 of the translation discloses that the ink contains 0.05-1.5% water-soluble polymer (last row of table).

The difference between JP 06049401 and the present claimed invention is the requirement in the claims of borax.

Asada, which is drawn to stencil printing emulsion ink, disclose the use of 0.1-2% sodium borate, i.e. borax, as an emulsion stabilizer (col.6, lines 31, 37, and 40-43).

In light of the motivation for using borax disclosed by Asada as described above, it therefore would have been obvious to one of ordinary skill in the art to use borax in the ink of either between JP 06049401 in order to improve the stability of the ink, and thereby arrive at the claimed invention.

9. Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asada (U.S. 6,165,258).

Asada discloses a stencil printing water-in-oil emulsion ink comprising 0.5-15% polymer and 0.1-2% sodium borate, i.e. borax. It is disclosed that the ink comprises 10-90% water phase and 10-90% oil phase (col.1, lines 5-6, col.1, line 66-col.2, line 1, col.6, lines 37, 40-43, and 55-56, and col.7, line 5-8).

Attention is drawn to col.6, lines 55 and 63-66 and col.7, lines 1-2 of Asada which disclose the use of carboxyvinyl polymer, i.e. acrylic resin, and alkyl-modified carboxyvinyl polymer, i.e. alkyl-modified acrylic resin, and that the ink comprises mixtures of polymers. Thus, it is clear that Asada discloses that the ink comprises alkyl-modified carboxyvinyl polymer either

alone or in combination with carboxyvinyl polymer and thus, meets the limitations of the present claims.

The only deficiency of Asada is that the reference discloses the use of 0.5% alkyl-modified carboxyvinyl polymer alone or in combination with carboxyvinyl polymer, while the present claims require an amount of 0.4%.

It is apparent, however, that the instantly claimed amount of polymer and that taught by Asada are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the amount of polymer disclosed by Asada and the amount disclosed in the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the amount of polymer, it therefore would have been obvious to one of ordinary skill in the art that the amount of alkyl-modified carboxyvinyl polymer alone or in combination with carboxyvinyl polymer disclosed in the present claims is but an obvious variant of the amounts disclosed in Asada, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

Response to Arguments

10. Applicants arguments with respect to Okuda et al. (U.S. 6,190,444), Ono et al. '151 (U.S. 5,948,151), and Ohshima et al. (U.S. 6,063,835) have been considered but they are moot in view of the discontinuation of these references against the present claims.

11. Applicants arguments filed 6/13/02 and 6/19/02 have been fully considered but, with the exception of arguments relating to Okuda et al., Ono et al. '151' and Ohshima et al., they are not persuasive.

Specifically, applicants argue that:

(a) Asada does not teach the use of alkyl-modified carboxyvinyl polymer or mixture of alkyl-modified carboxyvinyl and carboxyvinyl polymer and does not teach the use of alkyl-modified carboxyvinyl polymer and/or carboxyvinyl polymer in the amount presently claimed.

(b) Neither Ono et al. nor JP 06049401 disclose borax, alkyl-modified carboxyvinyl polymer, or mixture of alkyl-modified carboxyvinyl and carboxyvinyl polymer as required in the present claims.

With respect to argument (a), it is noted that col.6, lines 55 and 63-66 and col.7, lines 1-2 of Asada discloses the use of alkyl-modified acrylic resins and that the ink comprises mixtures of polymers. Thus, it is clear that Asada discloses that the ink comprises alkyl-modified carboxyvinyl polymer either alone or in combination with carboxyvinyl polymer and thus, meets the limitations of the present claims.

With respect to the amount of polymer, it is noted that Asada teaches the use of less than 25%, preferably, 0.5-15% polymer wherein the polymer includes alkyl-modified carboxyvinyl polymer and/or carboxyvinyl polymer. Both the broad disclosure and the preferred amount of polymer clearly overlap the amounts of alkyl-modified carboxyvinyl polymer or alkyl-modified carboxyvinyl polymer and carboxyvinyl polymer carboxyvinyl polymer set forth in present claims 11-12, 18-19, and 25, i.e. 0.01-1% or 0.1-0.6%.

With respect to present claims 6-10, which require the use of 0.2-0.4% carboxyvinyl polymer and claims 13 and 20 which require the use of 0.2-0.4% alkyl-modified carboxyvinyl polymer or alkyl-modified carboxyvinyl polymer and carboxyvinyl polymer, examiner has addressed both disclosures by Asada. (With respect to the following discussion of amount of polymer, it is noted that examiner's reference to "carboxyvinyl polymer" is meant to encompass carboxyvinyl polymer, alkyl-modified carboxyvinyl polymer, and mixtures thereof).

With respect to Asada's disclosure that the carboxyvinyl polymer is present in the ink in the amount of less than 25%, it is noted that this broad range clearly encompasses the 0.2-0.4% carboxyvinyl polymer. While the range disclosed by Asada is much broader than that presently claimed, the fact remains that the range does overlap that present claimed. Applicants' attention is drawn to MPEP 2131.03, where it is disclosed that when the prior art teaches a range within, overlapping, or touching the claimed range, such range anticipates if it discloses the claimed range with "sufficient specificity". It is further disclosed that "if the claims are directed to a narrow range, the reference teaches a broad range, and there is evidence of unexpected results within the claimed narrow range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an

anticipation of the claims." However, in the present application, there is no evidence of unexpected results regarding the amount of carboxyvinyl polymer, and thus, it is the examiner's position that Asada does disclose the claimed invention with sufficient specificity.

With respect to Asada's disclosure that the preferred amount of carboxyvinyl polymer ranges from 0.5-15%, it is the examiner's position, as set forth in paragraphs 6 and 9 above, that given that the amount of carboxyvinyl polymer disclosed by Asada, i.e. 0.5%, and that presently claimed are so close and further given the fact that no criticality is disclosed in the present invention with respect to the amount of carboxyvinyl polymer, it therefore would have been obvious to one of ordinary skill in the art that the amount of carboxyvinyl polymer disclosed in the present claims is but an obvious variant of the amounts disclosed in Asada, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

With respect to argument (b) examiner agrees that there is no disclosure in either Ono et al. or JP 06049401 of borax, alkyl-modified carboxyvinyl polymer, or mixture of alkyl-modified carboxyvinyl and carboxyvinyl polymer as required in the present claims.

With respect to the alkyl-modified carboxyvinyl polymer or mixture of alkyl-modified carboxyvinyl and carboxyvinyl polymer, it is noted that neither Ono et al. nor JP 06049401 is used to reject claims which require these types of polymer.

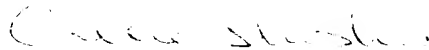
With respect to the borax, either Ono et al. or JP 0604901 is used in combination with Asada which discloses the use of 0.1-2% borax as an emulsion stabilizer and is drawn to stencil printing emulsion ink as are Ono et al. and JP 0604901.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Examiner
Art Unit 1714

CS

9/20/02